

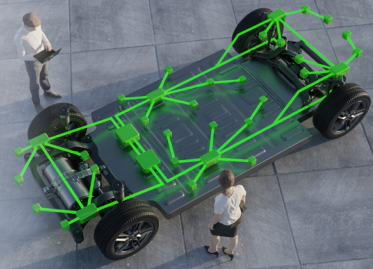
# EB zoneo

Making automotive networks fast, flexible, and secure



# EB zoneo

Efficient and reliable solution to master the challenges of automotive networks, within and between ECUs, including off-the-shelf, future-proof, and backwards-compatible solutions for domain, centralized, and zonal architectures



## Highlights

### EB zoneo SwitchCore

- ▶ Intelligent automotive-grade switch firmware to handle the ever-increasing network functions
- ▶ Perfectly handles complex network configuration, routing, QoS, firewall, device authentication, and time synchronization

### EB zoneo SwitchCore Shield

- ▶ EB zoneo SwitchCore Shield inherits all features supported by EB zoneo SwitchCore with extra cybersecurity protection from Argus Ethernet IDPS, a solution which helps to perform deep packet inspection of the Ethernet frames up to the application layer.
- ▶ Provides a powerful solution to software-defined E/E architectures which require high performance, flexibility, and strong protection against cyberthreats.

### EB zoneo VSwitch

- ▶ Virtualization module that mimics switch functionalities to provide fast and reliable communication between virtual machines and Ethernet networks
- ▶ Provides communication between VMs within the ECUs or HPC and between VMs and the Ethernet network
- ▶ Supports VMs using Classic AUTOSAR and VMs using Adaptive AUTOSAR (Linux)

## Benefits

- ▶ **Future-proof solution** – Enables the introduction of new vehicle functions that require high-speed, reliable, and secure in-vehicle networks, and copes with future challenges of distributed zonal architectures
- ▶ **Highly optimized solution** – Optimizes computational resource consumption by offloading network-related tasks to specific hardware units, maximizing the use of hardware features
- ▶ **Reduce total costs** – Accelerates the transition to service-oriented communication and facilitates the transition from domain to centralized and zonal architectures
- ▶ **Tried and tested** – Road-tested for a prominent line of production vehicles, supports leading OEM platforms such as Volkswagen and GM
- ▶ **Deep relation with hardware vendors** – Supports a broad range of hardware platforms such as Marvell, NXP, Realtek, and Renesas

### EB zoneo SwitchCore

- ▶ **More computational resources** – High-level network functions are directly executed on the switches
- ▶ **Fast startup and safer system recovery** – Assures independent startup of switches and reduces interdependency on the micro-controller unit
- ▶ **Efficient implementation** – Our software implementation is tightly coupled with hardware features.

### EB zoneo SwitchCore Shield

- ▶ **Optimized solution** – Offers a broad spectrum of various pre-integrated features simultaneously keeping high performance and a small software footprint
- ▶ **Early detection and prevention of unauthorized traffic** – Executes cybersecurity protection directly on the switch hardware, thus leading to an early and extensive detection of cyberthreats.

### EB zoneo VSwitch

- ▶ **Reduces software complexity** – Mastering the challenges of increased software complexity with hardware virtualization
- ▶ **Short development cycles** – There is a virtually unlimited number of connectors for VMs. Additional VMs can be added later. The connecting interface drivers are available for Linux, Android, and Classic AUTOSAR.